PIGEON RIVER

Sampling through the decades

What are *you* doing the first full week after the 4th of July?

TENNESSEE WILDLIFE RESOURCES AGENCY

Aquatic Habitat Protection Program

SPORT FISH RESTORATION

Federal Aid Project funded by your purchase of fishing equipment and motor boat fuels

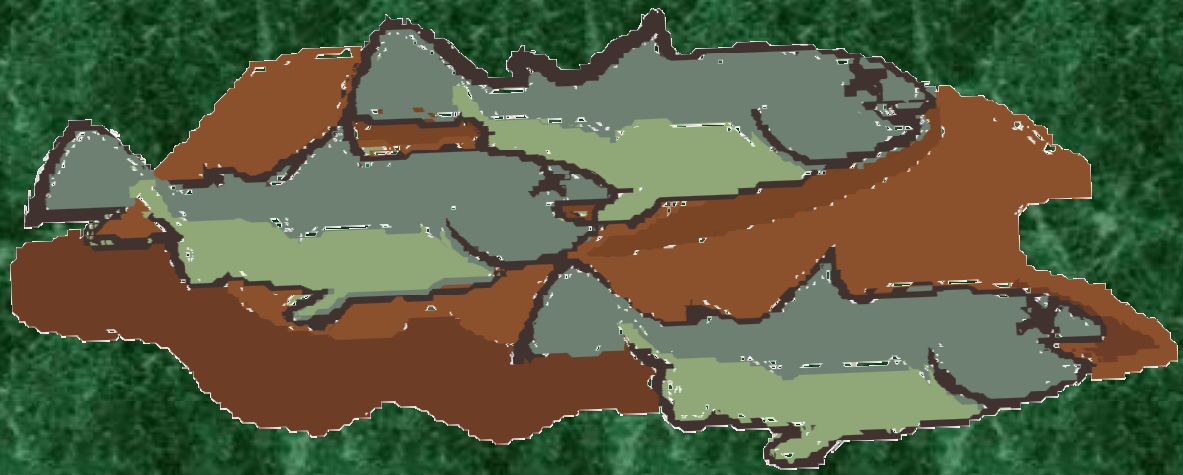
Pigeon River

Rivers and Streams
Pigeon River
Major Roads
Counties
Cities


WALTERS PLANT
CAROLINA POWER & LIGHT CO

A brief ...no, long history ...

- 1901 NC grants immunity from criminal prosecution for pollution
- 1908 Champion comes to Canton, NC



- 1927 Gov. Henry Horton: Lamentable Condition Bill

- 1942 Hess & Tazewell, U. S. Public Health Service

- 1960 Champion installs primary WWTP
- 1972 Champion installs secondary WWTP
- 1980 CPL drawdown of Waterville Reservoir
- 1982 TWQB Resolution; TWRC enlist AG's Office… Instream color becomes a biological issue

- 1985 Aug — Tn Supr. Ct decision: Remedy in Federal System
- 1985 — EPA assumes NPDES permit authority from NC
- 1986 — J. Sentelle, U. S. District Ct., rules in favor of EPA/TN

- 1988 May Dioxin becomes an issue in the Pigeon River

- 1988 Dec Gov. McWherter denies variance
- 1989 Sept EPA issues a NPDES permit with concurrence of TN
- 1990 Aug Champion begins modernization project
- 1992 TN intervenes in CPL relicensing

1992		J. Yost dismisses all challenges to EPA permit
1994		EPA issued permit expires
1996	May	NC issues DRAFT NPDES Permit
	June	TN objects to permit
	Dec	EPA Region 4 issues final approval
	Dec	TWRC enlists AG to take legal Action

1997 Jan TN sues NC in NC state court
Champion, NC, TN, EPA and conservation groups agree to settlement negotiations

Dec Parties sign settlement agreement
NPDES valid 1997 thru 2002
lawsuit settled

Anticipated Needs

- Reduce instream color in Tennessee
  25 apparent / 12 tru
- Reduce color pondage to < 25,000 lbs/per

- Expert Panel Recommendations
- Status of biological recovery (IBI)
- Status of recreational use (FSI)

Forked Stick Index

- Monitoring, Assessment, and Inventory Surveys

  - Water Quality
  - Benthic Organisms
  - Instream Color
  - Primary Productivity
  - Fish (IBI)
  - Contaminants – fish flesh, sediment, and ground water
  - Toxicity – effluent, sediment, instream
  - Effluent Monitoring
  - Photographic surveys
  - Biomarker Enzymes in Fish

THEN AND NOW

1974	2004

EFFLUENT COLOR

400,000 lbs/day to < 42,000 lbs/day

INSTREAM COLOR

800 color units to < 40 color units

FISH SPECIES

11 species to 40 species

MOLLUSC SPECIES

0 species to 9 species

WHITEWATER PADDLERS

12 / season to > 80,000 / season

6.4 million dollars / year

SPORT FISHING

None to Trophy Smallmouth Bass

DIOXIN

Chlorine bleaching to Oxygen delignification

Reference Data and Materials

- U.S. Environmental Protection Agency
- U.S. Geologic Survey
- Environmental Associates (EA) Inc.
- University of Tennessee
- University of North Carolina
- American Paper Institute
- Carolina Power and Light (Progress Energy)
- Tennessee Department of Health and Environment
- Tennessee Department of Environment and Conservation
- Tennessee Wildlife Resources Agency
- North Carolina Department of Natural Resources
- North Carolina Department of Game and Fish
- Oak Ridge National Laboratory
- Watters State Community College
- STORET
- The Nature Conservancy
- Virginia Tech